

REMARKS

Applicants acknowledge receipt of an Office Action dated November 30, 2004. In this response Applicants have added claims 18-38. Claims 1-17 have been canceled without prejudice or disclaimer. Following entry of these amendments, claims 18-38 are pending in the application.

Reconsideration of the present application is respectfully requested in view of the foregoing amendments and the remarks which follow.

Drawings

During a review of their file, Applicants have noted that the PTO has not yet acknowledged acceptance of the formal drawings submitted on September 14, 2001. Applicants respectfully request that the PTO acknowledge acceptance of the drawings in its next communication.

Specification

Applicants note the heading "Specification" which appears above a set of guidelines illustrating the preferred layout of the specification. The section does not appear to include any specific objections to the specification. Applicants believe that all of the PTO's objections to the specification were addressed in the previous response. If Applicants' understanding is incorrect, Applicants respectfully request that the PTO provide clarification in its next communication.

Claim Objections

On page 3 of the Office Action, the PTO has objected claim 16. In this response, Applicants have cancelled claim 16 without prejudice or disclaimer. Applicants submit that the newly added claims are free of the issues raised by the PTO with respect to claim 16. Accordingly, Applicants submit that the outstanding objection to claim 16 is now moot.

Rejections Under 35 U.S.C. § 103(a)

On page 3 of the Office Action, the PTO has rejected claims 11-13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 3,416,600 to Fink. While Applicants respectfully traverse this rejection, Applicants submit that the rejection is now moot in view of the cancellation of claims 11-13.

Allowable Subject Matter

Applicants acknowledge, with appreciation, the PTO's indication, on page 6 of the Office Action, that method claims 14-17 have been allowed.

Newly Added Claims

In this response, Applicants have added claims 18-39.

With respect to method claims 18-25, Applicants submit that Fink fails to disclose

a method for manufacturing a header for a heat transfer apparatus, comprising: providing a tube having an outside diameter (D), and outside radius (D/2), and a wall thickness (s); punching the tube without an internal die (i) to form a slot in the tube, (ii) to provide a tube having a ratio (D/2:s) of the tube's outside radius (D/2) to the tube wall thickness (s) of less than 5, and (iii) to provide a tube having a ratio (D:D1) of the tube outside diameter (D) outside of the region of the slot to the tube diameter in the region of the slot (D1) of between 1.02 and 1.5 spot heat treating and/or mechanically weakening the tube in the region to be punched before the step of punching"

as recited in claim 18. Fink likewise fails to disclose a header produced by the process of claim 18, a heat transfer apparatus comprising a head produced by the process of claim 18, or a motor vehicle comprising a heat transfer apparatus which comprises a header produced by the process of claim 18 as recited in claims 23-25.

With respect to claims 26-38, Applicants note that Fink fails to disclose a header for a heat transfer apparatus, comprising "wherein a ratio (D/2:s) of the tube's outside radius (D/2) to the tube wall thickness (s) is less than 5" or "wherein a ratio (D:D1) of the tube outside diameter (D) measured outside the region of the slot to the tube outside diameter (D1) measured in the region of the slot is between 1.02 and 1.5" as recited in independent claim 26.

Applicants note that the PTO stated, with respect to claim 11, that "[t]he specific ratio (D/D₁) is considered to be an obvious choice." The PTO then stated that "in [Applicant's] specification, the ratio values are a mere preference" and concluded that "it would have been obvious to one of ordinary skill in the art to employ *any* ratio (D/ D₁) for the purpose of minimizing pressure drop." However, these statements impermissibly rely upon Applicants' disclosure and fail to establish why or how one of ordinary skill in the art would arrive at the presently claimed *range*.

Applicants further note that Fink fails to disclose, teach or suggest the presently claimed combination of the ratios D:D₁ and D/2:s.


For the foregoing reasons, Applicants respectfully submit that claim 26 and the claims depending therefrom are novel and non-obvious in view of Fink.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that all of the pending claims are now in condition for allowance. An early notice to this effect is earnestly solicited. If there are any questions regarding the application, the Examiner is invited to contact the undersigned at the number below.

Respectfully submitted,

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The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.